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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/204,734	12/03/1998	GREGORY E. BOTTOMLEY	8194-205	5861

20792 7590 10/18/2002

MYERS BIGEL SIBLEY & SAJOVEC
PO BOX 37428
RALEIGH, NC 27627

EXAMINER

FAN, CHIEH M

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 10/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/204,734

Applicant(s)

BOTTOMLEY, GREGORY E.

Examiner

Chieh M Fan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-9,12,15-20,23,26-31 and 34-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-9,12,15,16,18-20,23,26-31 and 34-39 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 23 July 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the latest amendment filed on 7/18/02.

Claim Objections

1. Claims 4, 15 and 26 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 4 recites "the scaling step comprises the step of scaling the pilot despread values by the scale factors so as to obtain scaled pilot despread values that are a function of the relative strengths of the plurality of traffic channels and the plurality of pilot channels". However, the parent claim 1, on which claim 4 depends, recites "forming scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels" and "scaling the pilot despread values by the scale factors".

Therefore, the claimed limitation in claim 4 is inherent. Claims 15 and 26 have similar limitation with claim 4 and are therefore objected based on the same reason.

2. Claims 1, 4, 5, 7-9, 12, 15, 17-19, 23, 26-31 and 39 are objected to for the following reasons:

Regarding claims 1, 4, 5, 7-9, "using the scaled pilot despread values" in line 10 of claim 1 should be changed to ---using scaled pilot despread values---, since the terminology "scaled pilot despread values" has not been mentioned before in the claim.

Regarding claims 12, 15, 17-19, "using the scaled pilot despread values" in line 10 of claim 12 should be changed to ---using scaled pilot despread values---, since the terminology "scaled pilot despread values" has not been mentioned before in the claim.

Regarding claims 16, "using the scaled pilot despread values" in line 10 of claim 16 should be changed to ---using scaled pilot despread values---, since the terminology "scaled pilot despread values" has not been mentioned before in the claim.

Regarding claims 23, 26-31, "using the scaled pilot despread values" in lines 10-11 of claim 23 should be changed to ---using scaled pilot despread values---, since the terminology "scaled pilot despread values" has not been mentioned before in the claim.

Regarding claim 39, claim 39 should depend on claim 38.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 6, 16, 20, 28 and 34-39 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way

as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The independent claims of the instant application recite "scaling at least one of the traffic despread values, the channel estimates and the pilot despread values by the scaled factors" (claims 6, 16, 28, 34, 36, 38). These limitations imply that more than one of the traffic despread values, the channel estimates and the pilot despread values may be scaled. However, according to the description in the specification in lines 26-31 of page 8, it appears that only one of the traffic despread values, the channel estimates and the pilot despread values is scaled. Therefore, the claims of the instant application clearly contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The applicant argues that the support is provided at lines 29-33 on page 4 of the specification, as following:

According to the invention, the traffic despread values, the channel estimates and/or the pilot despread values are scaled by the scale factors so as to obtain detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels.

The Examiner noticed that such statement is in the "Summary of the Invention" section. The Examiner cannot find further support in any other portion of the application. As described above, the main body of the specification clearly teaches only one of the traffic despread values, the channel estimates and the pilot despread values is scaled. In order to scale at least one of the traffic despread values, the channel estimates and the pilot despread values as claimed, a person skilled in the art must place an additional

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scaler between the channel estimate and the multiplier in Fig. 5. Such arrangement would clearly change the operation of the instant application. Therefore, the description on lines 29-33 of page 4 contradicts the teaching of the rest of the specification. The following objection of the specification is therefore made.

Specification

5. The disclosure is objected to because of the following informalities: "and/or" on line 30 of page 4 should be changed to ---or---.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily

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published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 1, 4, 5, 7-9, 12, 15, 16, 18-20, 23, 24, 26, 27 and 29-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Bruckert et al. (US Patent 5,812,542).

Regarding claims 1, 12 and 23, Bruckert et al. ("Bruckert" hereinafter) discloses a method for processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels and a plurality of pilot channels, comprising the steps of:

receiving data samples from the plurality of traffic channels and the plurality of pilot channels (see 108 and 148 in Fig. 1);

correlating the received data samples to spreading codes to produce pilot despread values and the traffic despread values (see 252 through 255 in Fig. 2);

forming scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels (see col. 9, line 65);

estimating channel response using scaled pilot despread values to produce channel coefficient estimates (see col. 3, lines 28-38, also see col. 9, lines 41-54);

combining the traffic despread values to obtain detection statistics that correspond to information symbols, using the channel coefficient estimates (see col. 3, lines 28-38; also see 130, 158 and 138 in Fig. 1; also see 263 in Fig. 2); and

scaling the pilot despread values by the scale factors to form scaled pilot despread values, so as to obtain detection statistics that correspond to the relative

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strengths of the plurality of traffic channels and the plurality of pilot channels (see col. 9, lines 41-54, col. 10, lines 33-43; also see col. 11, lines 5-16).

Regarding claims 4, 15 and 26, see the mathematical expressions in col. 9, lines 42-53 and col. 10, lines 33-43). For example, the pilot signal P_1 is scaled by Y_{104} .

Regarding claims 5, 16 and 27, see col. 9, line 65 in Bruckert.

Regarding claims 7, 18 and 29, the plurality of traffic channels and the plurality of pilot channels correspond to a plurality of delays of a transmitted signal (see col. 3, lines 39-42, also see 166, 168, 170, 132, 134, 136 and 160, 162 and 164 in Fig. 1).

Regarding claims 8, 19 and 30, see col. 3, lines 25-28 and col. 4, lines 61-65 of Bruckert.

Regarding claims 9, 20 and 31, see the last line of col. 9 in Bruckert.

Allowable Subject Matter

8. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 17 is allowable because the prior art of record does not teach that the means for forming scale factors comprises means for forming an error signal using the pilot channel despread values and the traffic despread values and means for computing a scale factor based on the error signal.

Response to Arguments

9. Applicant's arguments filed 7/23/02 have been fully considered but they are not persuasive.

Regarding the rejection under 35 USC 112, first paragraph, the Applicant argues that the support is provided at lines 29-33 on page 4 of the specification.

Examiner's response --- the Examiner's response may be seen in Paragraph 4 of this Office Action.

Regarding the rejection under 35 USC 102(e) as being anticipated by Bruckert et al., the Applicant argues that Bruckert et al. does not teach estimating the channel responses using the scaled pilot despread values.

Examiner's response --- The mathematical expressions on col. 9, lines 41-54 clearly teach that the channel responses are estimated using the scaled pilot despread values (see for example, Y_{104xp1}). The block 261 in Fig. 2 is used for estimating the channel responses.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chieh M Fan whose telephone number is (703) 305-0198. The examiner can normally be reached on Monday-Friday 8:00AM-5:30PM, Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (703) 305-4714. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

Chieh M Fan *cmf*
Examiner
Art Unit 2634

cmf
October 16, 2002


STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600